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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,910	05/18/2006	Toshiaki Masuda	MMY-US041113	8921
22919	7590	05/06/2010		
GLOBAL IP COUNSELORS, LLP 1233 20TH STREET, NW, SUITE 700 WASHINGTON, DC 20036-2680			EXAMINER LENIHAN, JEFFREY S	
			ART UNIT	PAPER NUMBER
			1796	
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			05/06/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/595,910	Applicant(s) MASUDA ET AL.	
	Examiner Jeffrey Lenihan	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32, 35 and 37-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-31 and 38 is/are allowed.
- 6) ☒ Claim(s) 32, 35, 37 and 39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 September 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the amendment filed on 1/19/2010.
2. The objections and rejections not addressed below are deemed withdrawn.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

Drawings

4. The drawings were received on 9/17/2009. These drawings are acceptable.

Claim Rejections - 35 USC § 112

5. Claim 39 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 39 depends from itself; it is therefore unclear what combination of limitations the claim is intended to recite. Based on applicant's filed remarks, claim 39 has been treated as depending from claim 38, which is a new claim which recites a porous material composition, for the purposes of examination on the merits.

Claim Rejections - 35 USC § 103

6. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda et al, WO 03/099955, in view of Wu et al, US5834526, and Melber et al, US4722943.
7. The disclosures of Masuda and Wu are discussed in the previous Office Action, incorporated herein by reference.

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8. Masuda and Wu are silent regarding the claimed blocking agents.

9. Melber discloses the modification of unexpanded microsphere beads with a processing aid (abstract), wherein said modification prevents undesired agglomeration of said beads (Column 3, lines 44-46) and allows for the production of a dry, free-flowing unexpanded microsphere beads (Column 2, lines 23-25). Said processing aid may be an organic compound (Column 6, line 48) having a melting point (T_m) greater than 180 °C (Column 6, lines 35-39), corresponding to the claimed anti-blocking agent (for claims 35, 37).

10. Masuda, Wu, and Melber are all directed towards the field of expandable resins/beads. It therefore would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the thermo-expansive microcapsules of Masuda by modification with a processing aid comprising an organic compound having T_m greater than 180 °C, as taught by Melber, for the purpose of preventing undesired agglomeration of the microcapsules.

11. Claims 35 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda et al, WO 03/099955, in view of Melber et al, US4722943.

12. The disclosure of Masuda is discussed in the previous Office Action, incorporated herein by reference.

13. Masuda is silent regarding the attachment of an anti-blocking agent to the thermo-expansive microcapsules.

14. The disclosure of Melber is discussed previously in this Office Action.

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15. Masuda and Melber are both directed towards the field of expandable resins/beads. It therefore would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the thermo-expansive microcapsules of Masuda by modification with a processing aid comprising an organic compound having T_m greater than 180 °C, as taught by Melber, for the purpose of preventing undesired agglomeration of the microcapsules.

Allowable Subject Matter

16. Claims 1-31 and 38 are allowed.

17. The following is a statement of reasons for the indication of allowable subject matter:

18. Independent claim 1 and its dependent claims 2 and 4-10 are allowed per the reasons outlined in the previous Office Action, incorporated herein by reference.

19. Regarding claim 3: The closest prior art of record is Masuda et al, WO 03/099955, in view of Edgren et al, US4397799, which renders obvious a process of injecting microspheres in an inert liquid carrier into a hot gas glow through an atomizer. The prior art does not teach nor does it fairly suggest a process wherein a gaseous fluid containing microspheres are injected into a hot gas flow.

20. Regarding claims 11-20, 30, 31: The closest prior art of record is Masuda et al, WO 03/099955, in view of Edgren et al, US4397799, which renders obvious expanded microspheres prepared by expanding microspheres comprising a thermoplastic shell and a blowing agent process of injecting microspheres in a hot gas flow. As discussed

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in paragraph 24 of this Office Action, applicant has provided evidence that the particles rendered obvious by the prior art do not meet the claimed limitations regarding true specific gravity and the amount of aggregated particles; the prior art does not teach nor does it fairly expanded microspheres defined by the claimed combination of limitations.

21. Regarding claims 21-29, 38: The closest prior art of record is Masuda et al, WO 03/099955, in view of Wu et al, 5834526, which renders obvious expanded microspheres having similar composition and size as the claimed invention. As discussed in paragraph 25 of this Office Action, applicant has provided evidence that the particles rendered obvious by the prior art do not meet the claimed limitation regarding true specific gravity; the prior art does not teach nor does it fairly expanded microspheres defined by the claimed combination of limitations.

Response to Arguments

22. Applicant's arguments, see page 16 lines 9-15, filed 9/17/2009, with respect to the rejection of claim 3 over Masuda in view of Edgren have been fully considered and are persuasive. The rejection of claim 3 has been withdrawn.

23. Applicant's arguments with respect to claims 32, 35, and 37 have been considered but are moot in view of the new ground(s) of rejection.

24. Applicant has provided evidence that the expanded microspheres rendered obvious by the combination of Masuda and Edgren do not meet the required limitations of containing not more than 5% by weight of aggregated microspheres and not more than 5% by weight of microspheres having a true specific gravity not lower than 0.799

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g/cc at 25 °C (see 37 CFR 1.132 declaration filed 9/17/2009).The rejection of independent claim 11 and its dependent claims over prior art combinations of Masuda and Edgren are therefore withdrawn.

25. Applicant has provided evidence that the expanded microspheres rendered obvious by the combination of Masuda and Wu do not meet the required limitations of containing not more than 5% by weight of microspheres having a true specific gravity not lower than 0.799 g/cc at 25 °C (see 37 CFR 1.132 declaration filed 9/17/2009).The rejection of independent claim 21 and its dependent claims over prior art combinations of Masuda and Wu are therefore withdrawn.

Conclusion

26. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Lenihan whose telephone number is (571)270-5452. The examiner can normally be reached on Monday through Thursday from 7:30-5:00 PM, and on alternate Fridays from 7:30-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Irina S. Zemel/
Primary Examiner, Art Unit 1796

/Jeffrey Lenihan/
Examiner, Art Unit 1796

/JL/